

Claims

1. An isolated mammalian nucleic acid molecule selected from the group consisting of:

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(a) Nucleic acid molecules encoding T128 polypeptide as shown in Figure 1, a polypeptide at least 80% identical to T128, or a fragment thereof, which is capable of cross-reacting with sera from patients with prostate cancer.

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(b) Nucleic acid molecules comprising the nucleotide sequence depicted between nucleic acid residues 642 and 1688 of the sequence shown in Figure 2.

(c) Nucleic acid molecules, the complementary strand of which specifically hybridises to a nucleic acid molecule in (a) or (b).

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(d) Nucleic acid molecules the sequence of which differs from the sequence of the nucleic acid molecule of (C) due to the degeneracy of the genetic code.

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2. An isolated nucleic acid molecule according to claim 2, encoding the polypeptide sequence shown in Figure 1.

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3. An isolated nucleic acid molecule which is at least 80% homologous to a nucleic acid sequence as defined in claim 1 or claim 2 and which encodes a polypeptide which is expressed in higher concentrations in cancerous tissue compared to that tissue when in a normal state.

14. An isolated nucleic acid molecule comprising at least 15 nucleic acids capable of specifically hybridising to a sequence within a nucleic acid molecule according to any preceding claim.

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5. A vector comprising a nucleic acid molecule according to any preceding claim.

6. A host cell comprising a vector according to claim 5.
7. An isolated protein comprising an amino acid sequence encoded by a nucleic acid molecule according to any preceding claim.
8. An isolated protein according to claim 7 which comprises the amino acid sequence shown in Figure 1.
9. A fragment or derivative of a polypeptide according to claim 7 or claim 8.
10. A monoclonal antibody capable of specifically binding to a polypeptide, fragment or derivative according to any one of claims 7 to 9.
11. The use of an isolated nucleic acid molecule comprising a sequence according to any one of claims 1 to 4 to detect or monitor cancer.
12. The use of a nucleic acid probe which is capable of specifically hybridising an isolated nucleic acid molecule according to any of claims 1 to 4.
20. 13. A method of detecting or monitoring cancer comprising the step of detecting or monitoring elevated levels of a nucleic acid molecule comprising a sequence according to claims 1 to 4 in a sample from a patient.
25. 14. A method of detecting or monitoring cancer comprising the use of a nucleic acid molecule or probe according to claim 11 or claim 12 in combination with a reverse transcription polymerase chain reaction (RT-PCR).
15. A method of detecting or monitoring cancer comprising detecting or monitoring elevated levels of a polypeptide according to any of claims 7 to 9.
30. 16. A method according to claim 15 comprising the use of an antibody selective for a protein or peptide as defined in any of claims 7 to 9 to detect the protein or peptide.

17. A method according to claim 16 comprising the use of an Enzyme-linked Immunosorbant Assay (ELISA).

5 18. Use or method according to any one of claims 11 to 17, wherein the cancer is a gastro-intestinal cancer, kidney cancer or a prostate cancer.

10 19. A kit for use with a method according to any one of claims 13 to 18 comprising a nucleic acid, protein or peptide, or an antibody as defined in any one of claims 1 to 4 or 8 to 10.

15 20. A method of prophylaxis or treatment of cancer comprising administering to a patient a pharmaceutically effective amount of nucleic acid molecule comprising a nucleic acid sequence according to any of claims 1 to 4 or a pharmaceutically effective fragment thereof.

20 21. A method of prophylaxis or treatment of cancer comprising administering to a patient a pharmaceutically effective amount of a nucleic acid molecule hybridisable under high stringency conditions to a nucleic acid molecule comprising a nucleic acid sequence according to any of claims 1 to 4 or a pharmaceutically effective fragment thereof.

25 22. A method of prophylaxis or treatment of cancer comprising administering to a patient a pharmaceutically effective amount of a polypeptide as defined in any of claims 7 to 9 or a pharmaceutically effective fragment thereof.

23. A method of prophylaxis or treatment of cancer comprising the step of administering to a patient a pharmaceutically effective amount of an antibody according to claim 11.

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24. A method according to any one of claims 20 to 23, wherein the cancer is a gastro-intestinal cancer.

25. A vaccine comprising a nucleic acid molecule having a nucleic acid sequence as defined in any of claims 1 to 4 or a pharmaceutically effective fragment thereof and a pharmaceutically acceptable carrier.

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26. A vaccine comprising a polypeptide according to any of claims 7 to 9 or a pharmaceutically effective fragment thereof, and a pharmaceutically acceptable carrier.

27. A polypeptide according to claims 7 to 9 or a pharmaceutically effective fragment thereof, attached to a carrier protein.

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